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TITLE : ACTIVE MATERIAL FOR LITHIUM BATTERY

ABSTRACT : PROBLEM TO BE SOLVED: To provide an active material extending the lifetime of a lithium battery by consisting of a carbon material storing/releasing a lithium and a coating film of a silane coupling agent containing a fluorine atom in a molecule for covering the surface of the carbon material.

SOLUTION: A carbon material in an active material for a lithium secondary battery is a material capable of storing/releasing a lithium and to be a base of an electromotive reaction. Generally, as a powdered element is used, the powdered element is also used for the active material. When using the powdered element, a coating film of a silane coupling agent covers each of powdered particles. A natural graphite, artificial graphite in a sphere or fiber shape, hardly graphitized carbon and easily graphitized carbon such as a coke are used for the carbon material. The silane coupling agent forms the coating film on at least a part of the surface of the carbon material and easily reacts with a reactive functional group such as a hydroxyl group, vinyl group, amino group, epoxy group, alkoxy group and isocyanate group to form a stable protecting film.

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